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Implementation of the recommendations on the six mandated areas of the Permanent Forum and on the Millennium Development Goals

Impact of Climate Change Mitigation Measures on Indigenous Peoples and on Their Territories and Lands

Submitted by Victoria Tauli-Corpuz and Aqqaluk Lynge, Forum members**

Summary

At its sixth session, the Permanent Forum on Indigenous Issues appointed special rapporteurs to prepare a report on the impact of climate change mitigation measures on indigenous peoples. In the present paper, the authors summarize the effects of climate change on indigenous peoples, review mitigation and adaptation measures and analyse the impacts of these measures on indigenous peoples. The paper includes case studies of mitigation measures under the Kyoto Protocol and other voluntary measures that are affecting indigenous peoples adversely. It also includes some good-practice models and identifies opportunities for indigenous peoples. The recommendations provide practical steps for the Forum, and proposals for States, the United Nations Framework Convention on Climate Change, other United Nations bodies, programmes and agencies, and multilateral bodies on climate change mitigation matters.

* E/C.19/2008/1.

** The submission of this report was delayed in order to include the most recent information.

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I. Introduction

1. Climate change is capturing the attention of the international community in an unprecedented manner. According to the latest assessment report of the United Nations Intergovernmental Panel on Climate Change, there is now unequivocal evidence that the earth's climate system is warming,[1] very likely due to anthropogenic greenhouse gas (GHG) emissions.[2] In the absence of effective mitigation strategies, the Panel predicts that the air temperature of the earth will increase by 2.0 to 4.5 degrees by the end of the century, resulting in a sea level rise of at least 18 to 58 cm.[3] Predicted temperature increases in the Arctic are even more extreme; they are projected to rise 5 to 7 degrees by 2099.[4]

2. Since indigenous peoples have not been involved, in any significant way, in formal discussions related to the United Nations Framework Convention on Climate Change, the Permanent Forum on Indigenous Issues, at its sixth session, adopted the special theme, "Climate change, bio-cultural diversity and livelihoods: the stewardship role of indigenous peoples and new challenges", for its seventh session, in April 2008. The Forum appointed two special rapporteurs (Forum Chair Victoria Tauli-Corpuz, and Forum Vice-Chair and Arctic regional representative Aqqaluk Lynge), to prepare a report entitled, "The impact of climate change mitigation measures on indigenous peoples and on their territories and lands", to be considered at the seventh session.

3. This report presents an overview of the effects of climate change on indigenous peoples and their lands; a discussion of climate change mitigation and adaptation measures being undertaken at the international and national levels, and the impact of these measures on indigenous peoples and their lands; examples of the ways in which indigenous peoples are contributing to mitigation efforts, and recommendations for addressing the problem of climate change in ways that take into account the needs and contributions of indigenous peoples.

II. Effects of climate change on indigenous peoples and their lands

A. Global effects

4. The latest report by the Panel presents evidence drawn from all continents that shows increasing regional climate change.[5] Global warming is causing changes that will likely increase exponentially if no significant shifts in policy take place. Carbon dioxide, the principal GHG in the atmosphere, has increased by 35 per cent since the industrial revolution. Human activity, especially in the rich and industrialized

[1] See summary for policymakers of the synthesis report of the fourth assessment report of the Intergovernmental Panel on Climate Change.

[2] Ibid.

[3] Intergovernmental Panel on Climate Change fourth assessment report, part 1.

[4] Summary for policymakers of the synthesis report of the fourth assessment report.

[5] Intergovernmental Panel on Climate Change, "Fourth assessment report, climate change 2007: synthesis report summary for policymakers", 1-2 (2007).

nations, has not only undermined the ecological integrity of the earth but has also made the atmosphere a dumping ground for GHGs.[6]

5. In living off the land and gaining knowledge through their relationship with the land, indigenous peoples have been observing the effects of global warming first-hand for several decades and have been developing coping strategies. They have observed changes in temperature, changes in the amounts and qualities of rain and snow, and changes in seasons and phenology.[7] The impacts of global warming on the ecosystems or landscapes they inhabit and the ways in which their lives have been affected were presented at recent side events organized by Tebtebba[8] and the Inuit Circumpolar Council at the Bali Conference of Parties in December 2007.[9] Some examples are given below:

(a) More diseases associated with increasing temperatures and vector-borne and water-borne diseases such as cholera, malaria and dengue fever (tropical and subtropical areas);

(b) Worsening drought conditions and desertification, leading to increased numbers of forest fires that affect land use, subsistence agriculture and hunting and gathering livelihoods, and that bring about a serious loss of biodiversity (tropical and subtropical areas);

(c) Excessive rainfall and prolonged droughts, resulting in more occurrences of dust storms that damage grasslands, seedlings and other crops, including livestock of pastoralists and nomadic indigenous peoples (arid and semi-arid lands);

(d) Coastal and riverbank erosion and rising of rivers, caused by higher temperatures, thawing of permafrost, and melting mountain snow, glaciers and sea ice (Arctic);

(e) Reduced populations of animal species due to warmer temperatures; new marine species due to warmer sea water; and changes in animal travel and migration routes (Arctic);

(f) Increase in new types of insects and lengthened life spans of endemic insects (e.g., spruce beetles), which destroy trees and other vegetation (boreal forests);

(g) Coastal erosion exacerbated by a rise in sea level; stronger hurricanes and typhoons, leading to loss of land and property and dislocation of indigenous peoples (environmental refugees); loss of mangrove forests (coastal regions and small island States);

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[6] Greenhouse gases which are covered by the Kyoto Protocol include carbon dioxide (CO_2), nitrous oxide, methane, sulfur hexachloride, HFCs (hydro fluoro compounds) and PFCs (perfluoro carbons).

[7] Most indigenous peoples identify prominent phenological markers that signal the change of seasons, such as appearance of birds, blooming of flowers, etc. Changes they have observed show that these markers are occurring earlier or decoupled from the season or weather they used to come with.

[8] Tebtebba (Indigenous Peoples' International Centre for Policy Research and Education), an international organization of indigenous peoples based in Baguio City, Philippines.

[9] Summary of reports of side events organized by indigenous peoples and non-governmental organizations during the Climate Change Conference in Bali. From notes taken by Victoria Tauli-Corpuz.

(h) Food insecurity due to the difficulty of maintaining viable fish populations; coral bleaching due to higher sea temperatures (marine ecosystems);

(i) Increasing human rights violations, displacements and conflicts due to expropriation of ancestral lands and forests for biofuel plantations (soya, sugar cane, jatropha, oil palm, corn, etc.); increasing pests (e.g., locusts, rats, spruce beetles, etc.), which damage crops; increasing costs of food due to competition with biofuels, exacerbating food insecurity;

(j) Massive floods and strong hurricanes and typhoons, which destroy fertile soil, damage crops and cause loss of freshwater supply;

(k) Extreme and unprecedented cold spells, resulting in health problems, such as hypothermia, bronchitis and pneumonia, especially among old people and young children;

(l) Loss of indigenous peoples' traditional territories due to mitigation measures such as carbon sinks and renewable energy projects (hydropower dams, geothermal plants), taken without their free, prior and informed consent;

(m) Exclusion of indigenous peoples from the processes and mechanisms related to reducing emissions through deforestation and degradation and emissions trading.

B. Effects in the Arctic

6. Thus far, climate change has been felt most intensely in the Arctic. The average Arctic temperature has risen twice as much as the average global temperature in the past few decades.[10] In summer 2007, the polar ice cap shrank to the smallest size ever seen in satellite images, opening previously ice-jammed waterways, such as the Northwest Passage, for navigation.[11] The Inuit, who are an indigenous people inhabiting mostly coastal regions in the Arctic are, therefore, especially vulnerable.

7. The Arctic has been called the world's climate change barometer and indigenous peoples there are known as the mercury in that barometer.[12] Stephen Schneider, a leading climatologist on the Nobel Prize-winning Intergovernmental Panel on Climate Change, recently stated that the peoples of the North are bearing the brunt of the onslaught of climate change, even though they are not the ones to blame for causing it.[13]

8. At this point, the effects of climate change mitigation strategies on indigenous peoples of the Arctic are minuscule compared to the effects of climate change itself. For more than 20 years, indigenous hunters and elders in the Arctic have reported

[10] Arctic Climate Impact Assessment (ACIA), Impacts of a warming Arctic 2004 overview.

[11] Keaten, Jamey, "Arctic ice melt opens Northwest Passage", Associated Press, 16 September 2007.

[12] ACIA, Impacts of a warming arctic 2004 overview: Sheila Watt-Cloutier, Remarks upon receiving the Canadian Environment Awards Citation of Lifetime Achievement, Vancouver, BC, 5 June 2006.

[13] Stephen Schneider, "Global warming: do we know enough to manage the risks?" Presentation at the Institute of Arctic Studies, Dartmouth College, 22 January 2008.

changes in their environment.[14] Hunters speak of thinning sea ice that makes hunting much more dangerous, changes to permafrost that alter spring run-off patterns, a northward shift in seal and fish species, and rising sea levels with more extreme tidal fluctuations.[15] They report that species they rely on are disappearing and that hunting routes near shorelines have disappeared due to erosion brought on by the thawing of permafrost. Villages have experienced increased flooding in winter due to lessened or disappearing pack ice that normally protects shorelines from surging water.

9. The Arctic Climate Impact Assessment warns that reductions in sea ice will drastically shrink marine habitat for polar bears, ice-inhabiting seals and some seabirds, pushing some species towards extinction. Plant, animal, fish and bird species previously foreign to the Arctic are moving further north. The Assessment predicts the introduction of new diseases as new animals and insects enter the Arctic ecosystem.[16]

10. Due to the opening of the Northwest Passage, the issue of Arctic sovereignty may prove to be even more problematic than it was during the cold war. Transnational corporations, with the support of United Nations Member States, travel or engage in other activities in indigenous territories to prove that these areas belong to them, or to the international community, depending upon the country in question. Increased sea traffic through the Canadian Arctic will make the west coast of Greenland, the north slope of Alaska and northern Russia more vulnerable to environmental degradation. Increased commercial activity made possible by easier access to natural resources will bring more traffic and pollution to one of the most fragile ecosystems in the world. The health of Arctic plants and wildlife — and therefore the health of the indigenous peoples who rely on them for subsistence — is at stake.

III. Climate change mitigation and adaptation measures

A. Factors affecting mitigation and adaptation

11. Now that the Intergovernmental Panel has said that action must begin immediately to avoid irreversible damage, climate change has risen to the top of the global policy agenda. The Panel has presented stabilization scenarios requiring drastic reductions in GHG emissions within the next 10 to 15 years, and the European Union has adopted the position that the global temperature should not increase more than two degrees above pre-industrial levels. Another landmark report, the Stern Review,[17] analysed possible measures to combat climate change and concluded that extensive adaptation strategies are of the highest priority and that the costs of preventing climate change are significantly lower than the projected costs of damage from climate change.

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[14] Sheila Watt-Cloutier, Remarks upon receiving the Canadian Environment Awards Citation of Lifetime Achievement, Vancouver, BC, 5 June 2006.

[15] Sila Inuk. Interviews conducted in Disko Bay region, Greenland, 9-10 July 2007.

[16] Arctic Climate Impact Assessment, Impacts of a warming Arctic 2004 overview, p. 10.

[17] See www.hmtreasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm.

12. The international community, nation-States, civil society and the private sector are being called upon to develop mitigation and adaptation strategies to address the effects of climate change. Mitigation is the process whereby GHG emissions are reduced and the sinks of GHGs are enhanced. Adaptation is the process whereby ecological, social or economic systems adjust in response to actual or expected climatic stimuli and their effects or impacts.[18]

13. Strategies for mitigation and adaptation must take into account not only the ecological dimensions of climate change, but also the dimensions of human rights, equity and environmental justice. Indigenous peoples, who have the smallest ecological footprints, should not be asked to carry the heavier burden of adjusting to climate change. *Article 3.1* of the United Nations Framework Convention on Climate Change, adopted in Rio in 1992, states:

> The Parties should protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capacities. Accordingly, the Parties of developed countries should take the lead in combating climate change and the adverse effects thereof.

14. The "polluter pays" principle is an example of differentiated responsibility. Industrialized countries, which have contributed about 80 per cent of GHG emissions since the 1800s and contribute 50 per cent at present, should carry the heavier burden of mitigation. They have more wealth and better and more extensive energy and economic infrastructures with which to meet the costs and challenges of large-scale climate change mitigation.

15. Industrialized countries should also help poorer countries and poorer sectors of society to adapt to climate change and to achieve sustainable development. They have the capacity to develop environmentally friendly technologies that can be transferred to the developing world. Developing countries, on the other hand, have neither the resources nor the socio-economic infrastructure in place to use more expensive, carbon-neutral energy sources.

16. The Panel has stated that differences in the distribution of technological, natural and financial resources among and within nations and regions, and between generations, as well as differences in mitigation costs, are often key considerations in the analysis of climate change mitigation options.[19] These factors become especially relevant for most indigenous people, who have historically experienced and continue to experience overt, hidden, unintentional and systemic discrimination and exploitation.

B. Contributions by indigenous peoples

17. Indigenous peoples contribute significantly to the reduction of GHG emissions. Their successful struggles against deforestation, against mineral, oil and gas extraction in their ancestral territories, and against further expansion of monocrop plantations, as well as their sustainable production and consumption

[18] Smil et al., 2001.

[19] See Intergovernmental Panel on Climate Change, Summary report for policymakers, climate change 2001: mitigation, working group 3 (2001).

systems and their effective stewardship over the world's biodiversity, have kept significant amounts of carbon under the ground and in the trees. There are at least 370 million indigenous people throughout the world practicing mostly sustainable, carbon-neutral, or even carbon-negative, lifestyles, which have sustained them over thousands of years and which make a substantial contribution to the mitigation of climate change. In contrast, the United States, with a population of 300 million, makes up only 4 per cent of the total world population, but accounts for about 25 per cent of world GHG emissions.

18. About 45 per cent of the earth's land mass is devoted to agriculture,[20] and agricultural practices account for 13.5 per cent of all greenhouse gas emissions.[21] The majority of these emissions stem from poor agro-business practices in the areas of crop and grazing land management. Indigenous practices, such as rotational farming, pastoralism, hunting and gathering, trapping, and the production of basic goods and services, often use environmentally friendly, renewable and/or recyclable resources. For example, the Igorot of the Philippines,[22] the Karen of China, Myanmar and Thailand, and the Achiks of India[23] continue to practice traditional, rotational agriculture; this practice increases the overall health of forest and jungle ecosystems, which are critical to the mitigation of global warming.[24]

19. Deforestation and forest degradation account for approximately 17.4 per cent of global GHG emissions and nearly 28 per cent of global CO_2 emissions.[25] This makes deforestation the third source of GHG emissions after energy and industry related emissions. As of 2005, global forest cover was about 3,952 million hectares (ha).[26] Between 2000 and 2005, an estimated 7.3 per cent of world forest cover was lost.[27] The proposal to reduce emissions from deforestation and degradation, if done the right way, might be an opportunity to stop deforestation and reward indigenous peoples and other forest dwellers for conserving their forests. Indigenous agroforestry practices are generally sustainable, environmentally friendly and carbon-neutral. When the World Bank launched its Forest Carbon Partnership Facility in Bali, it received a lot of criticism from indigenous peoples, who had been excluded from the conceptualization process in spite of the fact that they are the main stakeholders where tropical and subtropical forests are concerned. To remedy this weakness, the World Bank will hold consultations with indigenous peoples from Asia, Latin America and Africa.

C. Kyoto Protocol

20. Since climate change is a global problem, the negotiation and implementation of international treaties are critical to mitigating its effects. Indigenous peoples are asking to what extent the international treaties are being implemented, whether the

[20] Ibid.
[21] IPCC, "Working group III report: mitigation of climate change", page 105 (2007).
[22] International working group for Indigenous Affairs, Indigenous Peoples of the Philippines, http://www.iwgia.org/sw16704.asp.
[23] Monisha Gangopadhyay, conference presentation: Valuing indigenous assets for survival among the "Indians" of India (2007).
[24] Ibid.
[25] See IPCC, "Working group III report: mitigation of climate change", page 105 (2007).
[26] Ibid.
[27] Ibid.

international treaties are effective or sufficient, and to what extent they are being invited to be key players in the development of the international treaties? Many indigenous peoples (including all indigenous peoples in the Arctic) are united in the opinion that the relevant international treaties are not sufficient and that, with some exceptions, the signatories are not adhering to these treaties. Many indigenous peoples link the failure of these mitigation efforts to the fact that the United Nations, other international bodies, and United Nations Member States did not, until recently, even pay lip service to involving indigenous peoples in processes leading to their international agreements.

21. The first international treaty addressing climate change was the 1992[28] United Nations Framework Convention on Climate Change, which, with a 192-party membership, is nearly universal.[29] Based on the objective of the Framework Convention of stabilizing greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system,[29] the 1997 Kyoto Protocol set GHG emissions targets that became fully operational in 2005.[30]

22. The Kyoto Protocol called for mandatory targets for GHGs from Annex I countries, ranging from -8 per cent to +10 per cent of their 1990 emissions levels, so as to reduce overall emissions by at least 5 per cent of the 1990 levels during the commitment period of 2008 to 2012.[31] In addition, the Protocol established three market-based mechanisms to achieve these targets.[32] These mechanisms are emissions trading, joint implementation and the clean development mechanism.[33]

1. Emissions trading

23. The emissions trading mechanism allows developed countries to earn and trade emissions credits through projects implemented in other developed countries or in developing countries. It also allows legal entities such as businesses and non-governmental organizations to participate as emissions traders under the responsibility of an authorizing country. Trading can occur at the intra-company, domestic and international levels.[34]

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[28] United Nations Framework Convention on Climate Change website, "Kyoto Protocol" page. http://unfccc.int/kyoto_protocol/items/2830.php.

[29] United Nations Framework Convention on Climate Change, "United Nations breakthrough on climate change reached in Bali" press release, 15 December 2007.

[30] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Art. 25 (1998).

[31] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Art. 2 (1998).

[32] United Nations Framework Convention on Climate Change website, Kyoto Protocol page. http://unfccc.int/kyoto_protocol/items/2830.php.

[33] United Nations Framework Convention on Climate Change website, Kyoto Protocol mechanism pages.
http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php;
http://unfccc.int/kyoto_protocol/mechanisms/emissions_trading/items/2731.php;
http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php.

[34] IPCC, 2007: Summary for Policymakers. In: Climate change 2007: mitigation. contribution of working group III to the "Fourth assessment report of the intergovernmental panel on climate change" [B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, L. A. Yeyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

2. Joint implementation

24. The joint implementation mechanism[35] allows Annex I countries to meet part of their required cuts in emissions by funding emissions-reducing projects in other Annex I countries. The country investing in the project receives emission credits that may be applied towards its own targets.

3. Clean development mechanism

25. The clean development mechanism works the same way as joint implementation, but applies to emissions-reducing projects in developing countries.[36] The clean development mechanism has two objectives: (a) to assist parties not included in Annex I to achieve sustainable development while contributing to the ultimate objective of the Convention; and (b) to assist parties included in Annex I to comply with their quantified emissions limitations and reduction commitments.

D. Exclusion of indigenous peoples

26. Indigenous peoples were not consulted in the creation of the United Nations Framework Convention on Climate Change or the negotiations on the Kyoto Protocol. In spite of this, the indigenous peoples of the Arctic carried out their own consultations with their hunters and with Western scientists, and concluded that even if United Nations Member States were to keep their promises and adhere to what they had signed, the mitigation efforts would not go far enough. They were already feeling the effects of climate change and called for stricter targets and for policies that would deal with adaptation.[37] They also feared, as did others, that by not signing the Kyoto Protocol, some of the biggest polluters would severely weaken the net effect of global mitigation efforts and would provide a disincentive to those that did sign the Protocol to follow through on their commitments.

27. Because of the exclusion of indigenous peoples from United Nations Framework Convention on Climate Change and Kyoto negotiations, the indigenous peoples who attended the eighth Conference of the Parties to the United Nations Framework Convention on Climate Change in New Delhi in 2002 made the following statement: "We indigenous peoples live in sensitive zones where effects of climate change are most devastating. Traditional lifeways are disproportionately affected by climate change, particularly in polar and arid zones, forest, wetland, river and coastal areas. ... Our duty as indigenous peoples to Mother Earth impels us to demand that we be provided adequate opportunity to participate fully and actively

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[35] See generally UNFCCC, Joint implementation: mutual help for countries with emissions targets, http://unfccc.int/kyoto_protocol/background/items/2882.php (accessed 4 December 2007); UNFCCC, Mechanisms: joint implementation, http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php (accessed 4 December 2007).

[36] UNFCCC website, Kyoto Protocol mechanism pages. http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php; http://unfccc.int/kyoto_protocol/mechanisms/emissions_trading/items/2731.php; http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php.

[37] Lynge, Aqqaluk. Speech given in Copenhagen, Denmark 1997.

at all levels of local, national, regional and international decision-making processes and mechanisms in climate change".[38]

E. Arctic countries

28. According to the Germanwatch climate change performance index 2008,[39] Arctic countries, where more than 40 indigenous peoples live, are among the best and the worst performers on addressing climate change. This index combines data from a country's overall CO_2 emissions, its trend of per capita emissions compared to emissions of previous years, and its national and international climate change policies, in order to rate the top 56 CO_2-emitting countries of the world. Unfortunately, the best performer, Sweden, only rates "good" on the index, so that even if the rest of the world were to adopt Sweden's approach to climate change, the level of CO_2 in the atmosphere would not be reduced sufficiently to prevent catastrophic climate change.[40] Denmark and Norway receive a rating of "average", Finland is said to be "poor", and Canada, the Russian Federation and the United States are classified as "very poor". Particularly disturbing is the fact that these "very poor" performers are among the top 10 CO_2-emitters in the world.

29. Although no country in the world is taking adequate action to mitigate climate change, every Arctic country is addressing the issue in some way. Common policies include subsidies or tax incentives to businesses and individuals for installing wind or solar energy, for switching to energy-efficient or alternative-energy-powered forms of transportation or for making energy-saving improvements to homes and factories. Most countries are also investing in international or national research and development projects on strategies for mitigating climate change.

30. Because the Arctic countries are technologically advanced and highly energy-dependent, their strategies for climate change mitigation emphasize technological solutions that enable them to continue current energy-consumption patterns. Indeed, most Arctic economies are heavily dependent on energy-intensive industries such as oil and gas, pulp and paper, and mining. They are moving in the direction of large-scale measures, such as carbon capture and storage and increased use of nuclear power plants. Finland is relying on allowances from the European Union's Emissions trading scheme to meet its Kyoto emissions targets. Denmark, Finland and Norway plan to supplement emissions reductions with credits from the Kyoto clean development mechanism in order to meet their targets.[41] The Russian Federation has shown little initiative in tackling climate change, but foreign-sponsored projects under the Kyoto joint investment mechanism may compensate for this to some degree.[42]

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[38] See http://www.klimabuendis.org/download/indigenous-peoples-statement-delhi-2002.pdf.

[39] Germanwatch, climate change performance index 2008, December 2007.

[40] Based on the premise that worldwide CO_2 emissions must be reduced by 45-60 per cent from 1990 levels in order to prevent a temperature increase of more than two degrees by 2050.

[41] See Demonstrable progress reports for Canada (15/11/06), Denmark (30/12/05), Finland (14/02/06), Norway (16/02/06), Russia (14/02/07) and Sweden (30/12/05). See National Communication 4 (27/07/07) for United States. All can be found at http://unfccc.int/national_reports/annex_i_natcom/submitted_natcom/items/3625.php.

[42] Klomegah, Kester Kenn, "Climate Change: Russia Lags in Cutting Emissions". Interpress Service: 19 March 2007.

F. From Bali to Copenhagen and beyond: renewable energy

31. Negotiations are now under way for an international climate change treaty to replace the Kyoto Protocol when its first phase expires in 2012. At the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Bali in December 2007, 187 countries agreed to launch negotiations that will continue throughout 2008 and conclude at a meeting in Copenhagen in 2009.[29] In Bali, indigenous peoples were included in the process for the first time, albeit peripherally.

32. Despite the overwhelming evidence that anthropogenic climate change is occurring and will have grave consequences, the road from Bali to Copenhagen is littered with political potholes. One major hurdle is the disagreement over how rapidly developing countries such as China and India should be incorporated into the next round of emissions targets. Particularly the United States of America, but also Canada and other Annex I countries, balk at setting difficult emission reduction targets for themselves while maintaining the Kyoto exemption for these high-emission developing countries. Underlying this position is the apparent fear that reducing GHG emissions will have a negative effect on economic growth. Meanwhile, the European Union has positioned itself to take a leadership role by committing to a 20 per cent reduction in GHG emissions (from 1990 levels) by 2020 and is urging the rest of the world to concretely adopt similar targets.[43] In all of this political wrangling, it is distressing to note that indigenous issues are virtually never mentioned, even though countries such as Canada, the Russian Federation and the United States of America are home to substantial indigenous populations.

33. While the politicians engage in their negotiations, scientists are experimenting with numerous technologies for mitigating climate change and are taking two main approaches to reducing the global level of GHGs in the atmosphere.

34. The first approach is to reduce consumption of fossil fuels by switching to alternative forms of energy and improving energy efficiency. It is estimated that 25.9 per cent of GHG emissions stem from energy production, and current emissions are predicted to increase by 50 per cent by 2030.[44] The Intergovernmental Panel on Climate Change has identified hydropower, solar energy, wind, geothermal energy, tides, waves and biomass as renewable energy sources.[45] Even advanced nuclear power is included, but this has been vigorously contested by environmental groups and indigenous peoples.

35. Nuclear power poses special problems for many indigenous peoples, because nuclear waste is often stored in places far from large urban centres, in areas inhabited by indigenous peoples. Furthermore, indigenous peoples often lack the political power to oppose such storage on their lands.[46] Rather than having to tolerate unauthorized intrusions upon their lands,[47] indigenous peoples should have

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[43] Volkery, Carsten, "Europe takes the lead in fighting climate change", Spiegel Online: 9 March 2007.

[44] IPCC, Working group III report: mitigation of climate change, page 253 (2007).

[45] IPCC, Contribution of working group III to the fourth assessment report of the Intergovernmental Panel on Climate Change, summary for policymakers, page 10 (2007).

[46] See http://www.wsdp.org/who.htm.

[47] See generally Winona LaDuke, *All our relations: native struggles for land and life*, pages 97-114 (Scott End Press 2007).

the right to give or withhold prior and informed consent, and they should possess veto power concerning nuclear waste storage projects on their territories and lands.

36. Many countries around the world are actively increasing their use of wind and solar energy, with few negative consequences. Wind energy projects could bring clean energy to the world and a tremendous windfall of economic development to some indigenous communities. It is estimated that the wind energy potential worldwide is 15 times the world's energy demands,[48] with much of this energy potential located on indigenous lands. Using solar power to generate electricity would seem to be a perfect cultural-economic match for indigenous people seeking to participate in climate mitigation. Indigenous peoples have long shared a special affinity for the power of the sun, as evidenced in various religious and cultural practices. More solar energy from the sun strikes the earth in one hour than all the energy consumed by the planet in an entire year.[49] Yet solar electricity provides less than 0.1 per cent of the world's electricity, and solar energy from sustainable biomass provides less than 1.5 per cent.[50]

37. The growing use of biofuels is more controversial. Of particular concern is the dramatic shift in agricultural production patterns that is taking place to meet the demand for biomass[51] and the fact that the nitrogen fertilizers used to increase biomass release such potent nitrous oxides that the net effect on GHG emissions is actually worse than if plain diesel were used instead of biofuel.[52]

38. Indigenous peoples are also concerned about the massive increase in the building of large hydroelectric dams, because of the potential displacement of indigenous peoples from their ancestral territories. The International Rivers Network has said that as of 1 November 2007, 654 hydropower projects were in the clean development mechanism pipeline, comprising 25 per cent of all clean development mechanism projects and 15 per cent of the annual generation of clean development mechanism credits.[53]

39. The second approach to reducing the level of GHGs in the atmosphere is to attempt to increase the earth's ability to absorb CO_2 through reforestation or other more experimental methods, such as carbon capture and storage. Carbon capture and storage involves capturing CO_2 in the atmosphere and injecting it into geological formations deep beneath the earth's surface where it will remain for hundreds of years, if not permanently. Carbon capture and storage appears to be safe for the environment surrounding the capture site, but there is some risk of leakage, which could have a sudden negative effect on the climate.[54] Carbon capture and storage appears to be moving past the experimental stage towards implementation.[29]

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[48] American wind energy association, How much energy can wind supply the world?, http://www.awea.org/faq/wwt_potential.html#How%20much%20energy%20can%20wind%20supply%20worldwide.

[49] U.S. Department of Energy, Basic research needs for solar energy, iv (2005).

[50] Ibid.

[51] George Monbiot, "North Biofuel Appetite Causing South Starvation". The Hindu: 7 November 2007.

[52] Study by Paul Crutzen. Cited in George Monbiot, "North Biofuel Appetite Causing South Starvation". The Hindu: 7 November 2007.

[53] See Barbara Haya, "Failed mechanism: How the clean development mechanism is subsidizing hydro developers and harming the Kyoto Protocol". International Rivers Network 4 (2007).

[54] CICERO. "An International Regulatory Framework for Risk Governance of Carbon Capture and Storage". CICERO Policy Note 2007:01.

40. In spite of some promising results in the area of mitigation research, the global community is not yet doing enough to mitigate climate change, and the initiatives undertaken so far have not adequately considered the needs and contributions of indigenous peoples. Indigenous peoples believe that in order for global climate change mitigation efforts to be successful, they must be centrally involved as meaningful partners in these efforts, whether in the area of international agreements, scientific research or technology development. They also believe that given the woeful inadequacies of mitigation efforts to date, adaptation measures need increasing consideration.

IV. Impact of climate change mitigation measures on indigenous peoples and their lands

A. Introduction

41. The implementation of climate change mitigation measures can have adverse as well as beneficial impacts on indigenous peoples. The few case studies cited below will show both types of impact.

B. Adverse effects of mitigation

1. Vulnerabilities of indigenous peoples

42. Indigenous people have an intricate relationship with their lands, environment, territories and resources. This relationship is the very basis of their economic, social and cultural systems, their ecological knowledge and their identities as distinct peoples. Their traditional livelihoods range from swidden agriculture to hunting and gathering, trapping, pastoralism and fishing. By virtue of these distinct characteristics, climate change affects them in a particularly adverse manner.

43. While many studies have identified human vulnerabilities with respect to climate change, and many have identified the effects of climate change on the physical environment, there has been little study of the effects of climate change or climate change mitigation measures on indigenous peoples specifically. Indigenous peoples have contributed the least to GHG emissions and have the smallest ecological footprints on the Earth, yet they suffer the worst impacts of climate change and of the mitigation measures being taken. They have not benefited, in any significant manner, from climate change funds for adaptation and mitigation, nor have they benefited from emissions trading schemes. The mitigation measures for climate change are very much market-driven, and the non-market measures have not received much attention. The human rights-based approach to development and the ecosystem approach, which can both be useful guides for the design and implementation of mitigation measures, are virtually ignored.

2. Indigenous peoples of the Arctic

44. The decision by the United States of America to increase biofuel usage set off an economic chain reaction that threatens to increase drastically the already high

cost of food and transportation fuel in the North.[55] This will be a problem not only for indigenous people who increasingly are forced to purchase some or all of their food in the cash economy, but also for those who rely on hunting and gathering techniques, which today include the use of fuel-powered boats in addition to traditional dogsleds and kayaks. Furthermore, since hunting and gathering has been made more difficult by the effects of climate change on land, sea and animals, it is difficult to offset the higher costs of food by returning to traditional hunting and gathering. Food security will become a large problem for many indigenous peoples of the Arctic.

45. An additional burden has been placed upon indigenous peoples through calls by special interest groups for hunters and gatherers to curtail the harvesting of certain flora and fauna in the name of adapting to the effects of climate change on these species. One example is the polar bear, which may be changing its behaviour and distribution due to the shrinking ice cover, but which, according to most accounts, is not in any danger of extinction or even threatened. Yet the shrinking ice cover has served as an excuse for animal rights groups and conservationists to turn the polar bear into a marketing icon for their causes. These groups have called for the species to be labelled as "threatened" and have put legal pressure on the United States of America to do so. The point here is not whether they are correct (by most accounts they are not), but rather that a burden is being placed upon indigenous peoples of the Arctic due to climate change. Further, a "threatened" status will affect the small, sustainable hunt, but will do nothing about climate change. In a hearing in the United States Senate on whether or not to list the species as "threatened", ice expert and Inupiaq Richard Glenn testified that the increase of marginal ice created by climate change has, in fact, benefits for ice seals and polar bears.[56] Mr. Glenn testified further that he was concerned that the proposed listing was being used as a legal tool to address climate change issues well away from the Arctic, not as a means to conserve a species.

3. The Benet of Mount Elgon, Uganda[57]

46. A signed agreement between the Forest Absorbing Carbon Dioxide Emission Foundation of the Netherlands and the Uganda Wildlife Authority in 1994 permitted the foundation to plant trees on the 25,000 hectares of Mount Elgon National Park of Uganda. The objective of the project was to create a plantation of eucalyptus trees which would store carbon, to offset the emissions generated by the energy utility companies in the Netherlands. Another Dutch company called GreenSeat also sells sequestered carbon from Mount Elgon to people wanting to offset the emissions caused by their aeroplane flights.

47. While project coordinators claim that the plantation has improved the lives of the people around the park, the indigenous people themselves (the Benet) say the exact opposite.

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[55] Canadian Press, "Ethanol Demand to Push Food Prices five per cent Higher Next Year: Economist", 22 October 2007.

[56] Richard Glenn testifying at a hearing of the Environment and Public Works Committee of the United States Senate, 30 January 2008.

[57] Kevin Smith, et al., *The Carbon-Neutral Myth: Offset Indulgences for your Climate Sins* (Imprenta Hija de J. Prats Bernadas, 2007).

48. After Mount Elgon was declared a national park in 1993, the Uganda Wildlife Authority violently forced the residents of Mount Elgon to leave the area and move to caves and mosques in neighbouring villages. Park rangers killed more than 50 people in 2004. In addition, the project took away what little income the people had had from their lands and crops. The villagers are not allowed to graze their cows and goats in the area or to obtain food or important traditional materials from the forest.

49. The Benet took the Government to court in August 2003 to reclaim their land rights. In October 2005, Justice J. B. Katutsi ruled that the Benet people were historical and indigenous inhabitants of the said area which was declared wildlife protected area or national park. He ruled that the Benet be allowed to live on their land and continue farming it.

50. When this story was exposed, the Uganda Wildlife Authority-Forest Absorbing Carbon Dioxide Emission Foundation organization, GreenSeat, and other institutions engaged with the project, including the Forest Stewardship Council, the Société Générale de Surveillance and the clients of GreenSeat (including members of the Dutch Parliament, WWF Netherlands, Amnesty International and Body Shop) rationalized their own actions, claimed ignorance or denied any responsibility.

4. Carbon forestry projects in India[58]

51. A review of several joint forest management projects in India found that some had led to increased conflict due to income disparities among communities, conflict over forest areas that were open for harvest, indiscriminate fining, and curtailment of customary land use and tenure practices.[59] A joint forest management project in Madhya Pradesh left a legacy of disempowerment among the Adivasi (indigenous people) and community-level divisions.[60]

52. Joint forest management is supposed to provide a system for forest protection and sustainable use through the establishment of village forest protection committees, through which Government and development aid funds are channelled. Joint forest management was designed partly to ensure that forest-dependent peoples gain benefits from protecting forests.

53. In 2001, Community Forests International (CFI) carried out two feasibility studies in Madhya Pradesh and Andhra Pradesh to examine systems that could compensate communities for carbon sequestration and storage resulting from forest regeneration using the mechanism of joint forest management. CFI concluded that the joint forest management projects had improved the standard of living of the Adivasi and their relationship with the Forest Department, while regenerating forests.

54. However, subsequent interviews by activists in Madhya Pradesh found that the Adivasi communities in the Harda Forest Division were not even aware of the CFI feasibility project, and that they did not know of the concept of carbon forestry. The wealth of local and written information exposing the problems with joint forest

[58] Village Forest Protection Committees in Madhya Pradesh: an update and critical evaluation by Emily Caruso of the Forest Peoples Programme and Anurag Modi, Shramik Adivasi Sangathan, October 2004.

[59] *The Clean Development Mechanism: Issues for Adivasi Peoples in India*, 12 (2005).

[60] As documented in reports such as Sarin, et al., 2003, the summary report of Jan Sunwai (public hearing) on forest rights at the village of Indpura, Harda District, 26 May 2001, etc.

management in Madhya Pradesh was not cited in studies undertaken for the CFI feasibility project. The CFI conclusions did not consider the views and perspectives of the range of social groups and rights holders who had expressed large-scale opposition to the existence of village forest protection committees and rejected them as a basis for forestry-related schemes in Madhya Pradesh. Activists and Adivasi leaders in India fear that the impacts of implementing carbon forestry would pose a great threat to indigenous communities.

5. Oil palm plantation expansion in Malaysia and Indonesia

55. The Intergovernmental Panel on Climate Change has identified the production of second-generation biofuels, to be used in place of fossil fuels, as another way of mitigating climate change. A special report, which included an analysis of some of the problems related to the production of biofuels (in particular, oil palm), was presented at the sixth session of the Forum.[61] That report highlighted how indigenous peoples in Malaysia and Indonesia have been affected by the aggressive expansion of oil palm plantations. It has been used by the Aliansi Masyarakat, Adat Nusantara, a national federation of indigenous peoples' organizations in Indonesia, and other organizations as an annex to their submission to the Committee on the Elimination of Racial Discrimination.

56. The production of biofuels provides both opportunities and challenges. Given the proclivity for agricultural production among many indigenous peoples, biofuels could potentially provide great economic opportunities. However, the production of biofuels can offset potential gains in GHG emissions when forests are cleared for the production of crops such as sugar cane and soya in Argentina and Brazil or palm oil in South-East Asia. The clearing of forests for production can also lead to the violation of the land rights of indigenous peoples, as can be seen in Indonesia and Malaysia.[62] Biofuel production has increased the price of food crops, causing further food insecurity. A recent study has shown that filling the tank of an SUV with ethanol requires enough corn to feed a person for a year.[63]

C. Beneficial effects of mitigation

57. Despite the problems caused by climate change mitigation strategies, there are clean development mechanism projects being implemented in indigenous peoples' territories with good results.

1. Jepirachi wind power project in Colombia[64]

58. The Guajira region on the north-east Atlantic coast of Colombia is one of the poorest on the South American continent, with high levels of disease and illiteracy and, prior to this project, it had no permanent access to water or reliable access to electricity. The Government of Colombia has given the Wayuu, the indigenous people of the area, legal rights to their traditional lands.

[61] See www.un.org/esa/socdev/unpfii/documents/6session_crp6.doc.

[62] See http://news.mongabay.com/2007/0516-indigenous.html (15 May 2007).

[63] *The Economist*, "The End of Cheap Food" (6 December 2007).

[64] See UNFCCC Reference No. 0194.

59. A windswept, arid, coastal region, Guajira is an ideal location for wind generation. The Jepirachi wind power project, established by the World Bank through its Prototype Carbon Fund[65] with the utility company Empresas Públicas de Medellin and support from the Ministries of Mines and Energy, became operational in February 2004. The project is expected to reduce carbon emissions by 1,168,000 tons over a 21-year operational period.

60. The World Bank asserts that the Jepirachi wind power project also contributes to the sustainable development of Colombia. The demonstration of the potential of wind-based energy generation at the commercial level is expected to bring investment into the country. The non-hydraulic energy contributed by the project to the national grid is critical for Colombia, as it enhances the reliability of the grid in the wake of the power shortages, severe drought and forced rationing of the 1990s.

61. Finally, the project will contribute to the development of the host indigenous community by financing a series of community-driven projects designed in consultation with the project sponsor. The features of the social plan include training to facilitate direct and indirect job creation; the provision of a water desalinization plant fed by wind power; the provision of water storage depots; the rehabilitation of the cemetery; and the provision of health and educational facilities. The project has employed almost 150 indigenous individuals during its construction.

2. San Andrés de Sotavento

62. In the northern tropics of Colombia, the indigenous peoples of San Andrés de Sotavento are partners in a project with the Environmental corporation of the Sinu and San Jorge Rivers, the Colombian National Agricultural Research Organization and the International Center for Tropical Agriculture.[66] This clean development mechanism project aims to regenerate degraded tropical savanna by establishing silvopastoral systems and reforested areas over 2,600 hectares. This will yield increased income and profits for landowners and a healthier ecosystem. The BioCarbon Fund acts as the broker for carbon trading and certifies the carbon emission reductions.

3. Western Arnhem fire management Agreement[67]

63. Aboriginal landowners, indigenous representative organizations in North Australia, and Darwin Liquefied Natural Gas are partners in the Western Arnhem fire management Agreement. This partnership aims to implement strategic fire management practices across 28,000 square kilometres of Western Arnhem, thereby reducing fire-generated GHGs from this area and offsetting some of the GHG emissions from the liquefied natural gas plant at Wickham Point in Darwin Harbour.

64. The project uses strategic, early, dry-season burning that involves a mix of patch-burning lit by people on the ground and larger-scale fire breaks lit along

[65] A partnership between 17 companies and six Governments, and managed by the World Bank, the PCF became operational in April 2000. As the first carbon fund, its mission is to pioneer the market for project-based greenhouse gas emission reductions while promoting sustainable development and offering a learning-by-doing opportunity to its stakeholders. The Fund has a total capital of $180 million (Source: www.carbonfinance.org — the World Bank's website for its carbon fund projects).

[66] See http://www.ciat.cgiar.org/epmr_ciat/pdf/poster_45_epmr07.pdf.

[67] See http://savanna.ntu.edu.au/information/arnhem_fire_project.html.

tracks, rivers and creeks from helicopters. This dry-season burning breaks up the landscape with firebreaks and makes it more difficult for wildfires to spread across the land later in the year.

65. This project is not gaining income from carbon trading. Instead, indigenous fire managers are being paid for fire management that produces GHG offsets. The involved parties believe, however, that this project would qualify for carbon trading in the future, should the market arise.

V. Conclusions

66. Indigenous peoples all over the world are greatly concerned about climate change, not only because they are affected by both the problem of climate change and international attempts to mitigate it, but more importantly, because of the contributions that they can make to mitigation and adaptation strategies. There are many strategies that can be used effectively both to mitigate climate change and to facilitate adaptation to climate change, such as sustainable land and resource use, sustainable forest management, sustainable agriculture, the protection and enhancement of sinks and reservoirs of GHGs and small-scale, community-managed renewable energy systems. If these strategies are implemented so as to take into account not only the ecological dimensions of climate change, but also the dimensions of human rights, equity and environmental justice, they will also protect and conserve the territories of indigenous peoples.

67. The capacity of indigenous peoples to adapt to climate change has been highly compromised, not only because of the magnitude of the impacts of climate change, but also because support from the international community has not been forthcoming. As stewards and custodians of the world's biodiversity, cultural diversity and traditional ecological knowledge, indigenous peoples can contribute meaningfully to the design and implementation of more appropriate and sustainable mitigation and adaptation measures.

VI. Recommendations of the special rapporteurs

68. **The international community should take serious measures to mitigate climate change. The survival of the traditional ways of life of indigenous peoples depends in large part on the success of international negotiations in developing strong, enforceable agreements that will truly be effective in combating climate change. We concur with the main argument of the Stern Review report on the economics of climate change that strong and immediate measures to curb greenhouse gas emissions now will be less costly than attempting to adapt to the widespread changes that unchecked climate change will cause in the future.**

69. **Policymakers around the world should consider the broad, long-term consequences of the climate change mitigation policies they choose. While allocating their research and development funding and setting the criteria for clean development mechanism projects, they must look beyond the simple question of whether a particular form of alternative energy or carbon absorption technique can provide a short-term reduction in greenhouse gases. Policymakers should consider the long-term sustainability of any mitigation**

policy they choose, following the example of indigenous peoples who have been stewards of the land and seas for millennia.

70. **The business community and its regulators should incorporate our rights as indigenous peoples into their plans for economic development in our territories. Let us remind Governments and businesses preparing for new ventures to consider our stakeholder rights, as well as our land claims rights and our broader human rights.**

71. **Indigenous peoples must stand together to preserve our rights to maintain our traditional use of plants and animals for hunting and gathering. We as indigenous peoples have preserved the biodiversity of our lands for millennia by caring for nature and using it only in sustainable ways. The places where we have been able to live free from so-called development are now recognized as the most biologically diverse places on earth. With such a track record, we of all people are justified in demanding that we be allowed to continue our traditional uses of plants and animals.**

72. **United Nations Member States should assist indigenous peoples of the world with their adaptations to the increasingly negative impacts of climate change, while at the same time continuing, in parallel, to work on mitigation measures.**

73. **Because the Arctic is an early indicator of climate change for the rest of the world, and because its coastal indigenous peoples are at this time particularly vulnerable, United Nations Member States and agencies should designate the Arctic region as a special climate change focal point.**

74. **United Nations Member States and international industry should work closely with indigenous peoples in determining positions on who has control or sovereignty over the Arctic, and they should make public declarations supporting the right of indigenous peoples to play a meaningful role in the deliberations over rights of access to the changing Arctic.**

75. **The social dimension of climate change needs to be considered, so that the social and cultural impacts on indigenous peoples are more visible. It is important to understand the relations formed between people and nations as they address the dumping of GHGs into the global atmosphere commons.**

76. **The Annex I countries should implement their commitments to the Kyoto Protocol by doing all they can to shift their economic systems towards low-carbon systems instead of relying mainly on the purchase of emission credits to offset their emissions. The rapidly industrializing developing countries should also undertake serious efforts to cut their emissions and develop low-carbon energy systems.**

77. **The perpetuation of highly centralized, fossil-fuel-based energy supplies should be challenged. Old centralized electricity grids, which are not suitable for the challenges of diverse and decentralized renewable energy sources, and which are the basis of the dominance of large energy companies, need to be challenged.**

78. **The principles of common but differentiated responsibilities, equity, social justice and sustainable development should remain the key principles underpinning climate change negotiations, policies and programmes. The**

human rights-based approach to development and the ecosystem approach should guide the design and implementation of national, regional and global climate policies and projects. The crucial role of indigenous women and indigenous youth in developing mitigation and adaptation measures should also be ensured.

79. The support of the World Bank and other multilateral and bilateral financial institutions for fossil-based energy projects and large-scale hydropower dams is greater than their support for renewable and decentralized systems. Increased support for restructuring and reorientation towards low-carbon national energy policies should be provided.

80. The promotion of large-scale technologies, whether these are nuclear energy, large-scale bioenergy or large-scale hydropower technologies, should be discouraged. Plans to build large hydro-dams should take into consideration the recommendations of the World Commission on Dams.

81. Adaptation funds should be provided immediately to indigenous peoples who are affected by climate change-related disasters. Indigenous peoples whose lands have already disappeared due to sea-level rise and erosion and who have become environmental refugees should be provided with appropriate relocation with the support of the international community.

82. The full and effective participation of indigenous peoples in the forthcoming negotiations for the next Kyoto Protocol commitment period should be ensured. Proposals for mechanisms to achieve this should be brought to the negotiating table. A working group on indigenous peoples and climate change should be established within the United Nations Framework Convention on Climate Change.

83. Scientists, policymakers and the international community as a whole should undertake regular consultations with indigenous peoples so that their studies and decisions will be informed by the traditional knowledge and experiences of indigenous peoples. The Forum can play a role in ensuring that the traditional knowledge and best practices of indigenous peoples relevant to fighting climate change and its impacts will be considered in the negotiation processes leading to the Copenhagen meeting of the Conference of the Parties and beyond. The Forum should discuss the modality for such an interaction with the Framework Convention.

84. The United Nations Declaration on the Rights of Indigenous Peoples should serve as a key framework in the formulation of plans for development and should be considered in all processes related to climate change at the national, regional and global levels. The safeguard policies of the multilateral banks and the existing and future policies on indigenous peoples of United Nations bodies and other multilateral bodies such as the European Commission should be implemented in all climate change-related projects and programmes.

85. Indigenous peoples should be given substantial support to nurture and develop their traditional knowledge, their environment-friendly technologies, their cultural diversity and the biodiversity in their territories. Their sustainable, traditional livelihoods should be recognized and reinforced instead of being denigrated and destroyed. There is a need to reform existing laws which discriminate against indigenous land tenure systems and livelihoods. The

discussions and negotiations on strengthening the links between climate change, biodiversity and cultural diversity should ensure the participation of indigenous peoples.

86. **Policy support, technical assistance and funds should be given to indigenous peoples who are undertaking their own mitigation measures in the areas of building small-scale energy systems, biodiversity conservation, engagement with emissions trading, keeping the oil, coal and gas in the ground and the trees in the forests, etc. They should be equipped with the knowledge and tools to engage and benefit from the carbon market (if they choose this as an option). They should gain benefits from the environmental services derived from their territories and resources. Processes and mechanisms for the valuation of these environmental services and methods that allow them to get adequate benefits should be developed jointly with them.**

87. **Training workshops and other capacity-building activities undertaken by indigenous peoples to deepen their knowledge on climate change and design and to allow them to implement more effective and appropriate mitigation and adaptation measures should be supported. Efforts to create better documentation of good practices in mitigation and adaptation and to replicate and upscale these practices should likewise be supported.**

88. **The recommendations and proposals that emerged from the consultations of indigenous peoples and the World Bank on the Forest Carbon Partnership Facility and other carbon funds such as the BioCarbon Fund should be implemented by the Bank and other relevant agencies. Indigenous peoples should be centrally involved in the design, implementation and evaluation of the Forest Carbon Partnership Facility. Displacement and exclusion of indigenous peoples from their forests, which may be triggered by projects funded by the Forest Carbon Partnership Facility, should be avoided at all costs. Indigenous peoples, through their representatives, should have a voice and a vote on the decision-making body of the Forest Carbon Partnership Facility and on those of other climate change funds that will have impacts on them. Those who opt not to participate in reduction of emissions from deforestation in developing countries or in the Forest Carbon Partnership Facility-supported projects should be respected.**

89. **The Permanent Forum and the Human Rights Council expert mechanism on indigenous peoples should evaluate whether existing and proposed climate change policies and projects adhere to the standards set by the United Nations Declaration on the Rights of Indigenous Peoples, ratified in September 2007. These bodies, together with the members of the Inter-Agency Support Group for Indigenous Issues, should collaborate with States and indigenous peoples to effectively ensure that the implementation of the Declaration is central to the design and implementation of climate change policies and programmes.**

90. **Indigenous peoples' organizations and the members and secretariat of the Permanent Forum on Indigenous Issues and members of the Inter-Agency Support Group should jointly develop a road map towards the 2009 Conference of the Parties in Copenhagen using the recommendations presented in the present paper. The Forum welcomes the offer of the Greenland Home Rule Government to ensure indigenous peoples' participation in Copenhagen. The Forum supports the forthcoming global summit on indigenous peoples and climate change, which is being organized by the Inuit Circumpolar Council with the assistance of other indigenous peoples' organizations.**